

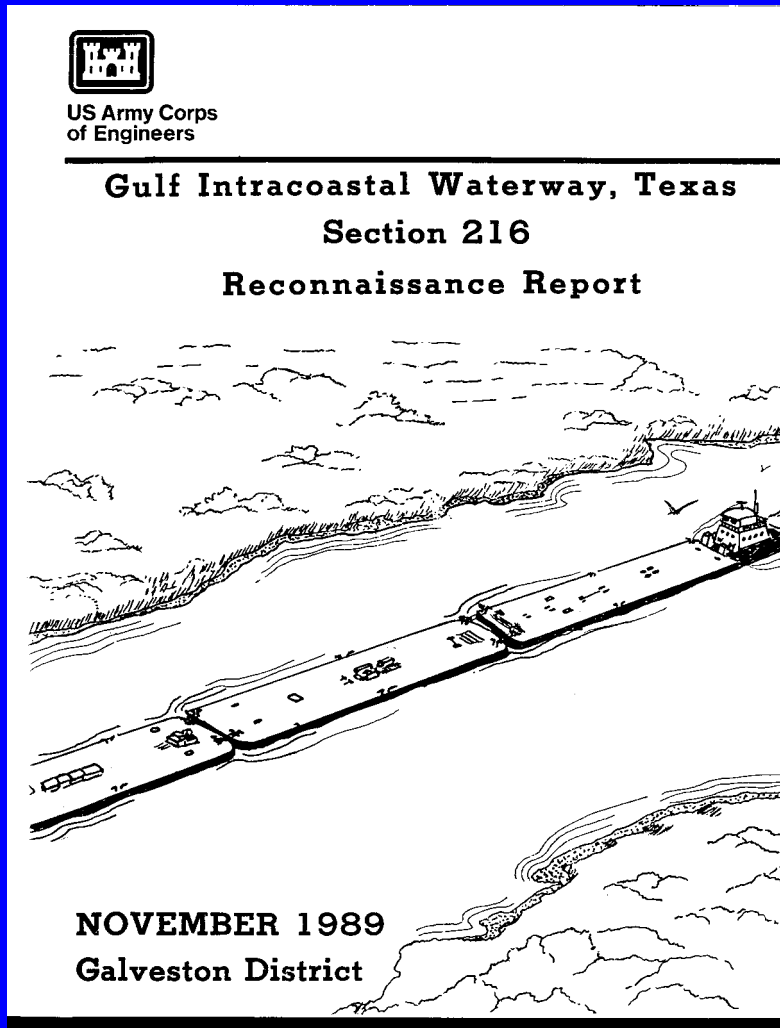


Welcome to the US Army Corps of Engineers
Galveston District

Gulf Intracoastal Waterway High Island to Brazos River Feasibility Study

Section 216 Authority

Initial Appraisal



November 1989

11 Segments

- Sargent Beach
- Aransas National Wildlife Refuge
- Port Bolivar to Matagorda Bay
- Brazos River Floodgates
- **High Island to Port Bolivar**
- Corpus Christi Bay to Mud Flats
- Matagorda Bay to San Antonio Bay
- San Antonio Bay to Corpus Christi Bay
- Mud Flats to Port Isabel
- Sabine River to High Island
- Colorado River Locks

GIWW Study Reaches

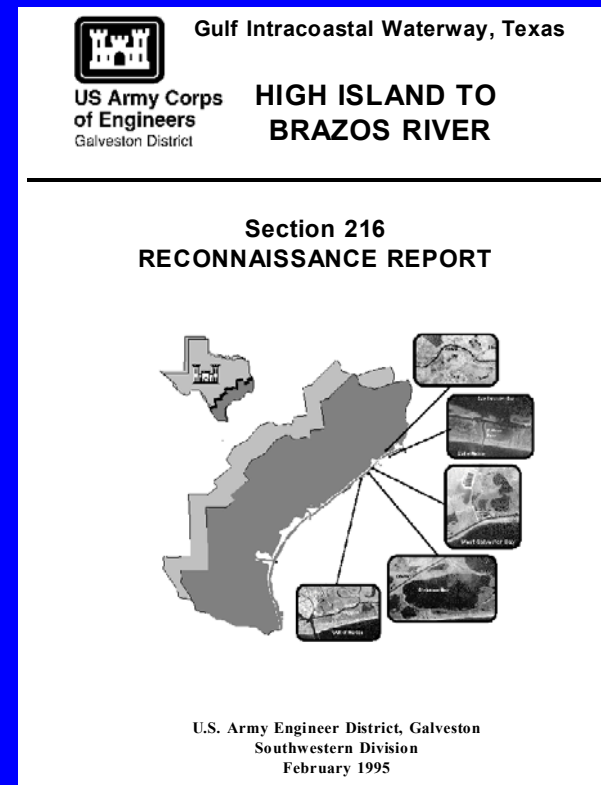
- Nine (9) Individual Study Segments:
 - Sargent Beach
 - Aransas National Wildlife Refuge
 - Corpus Christi to Port Isabel (Lower Laguna Madre)
 - **High Island to Brazos River**
 - Port O'Connor to Corpus Christi
 - Brazos River to Port O'Connor
 - Sabine River to High Island
 - Colorado River Locks
 - Brazos River Floodgates

High Island to Brazos River

Section 216

Reconnaissance Report

- Initiated
 - February 1994
- Completed
 - February 1995



High Island to Brazos River

Section 216

Reconnaissance Report

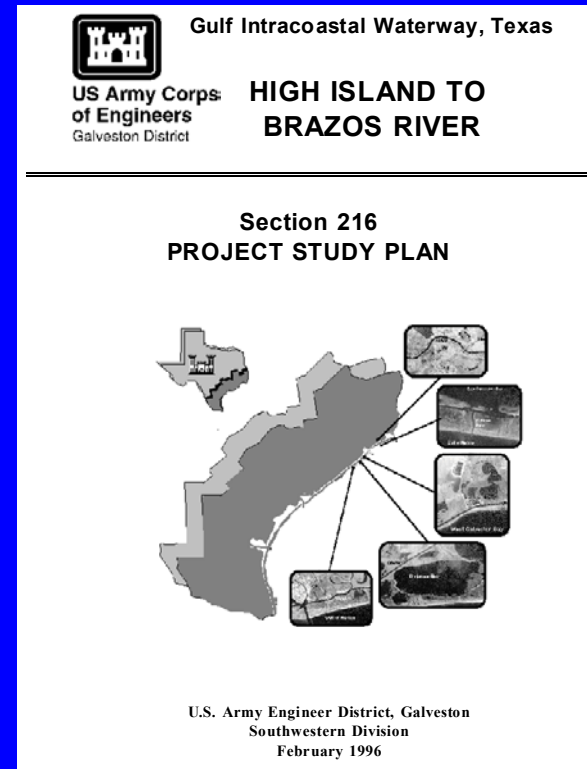
- High Island Bends
- Rollover Pass
- Texas City Wye
- Pelican Cut Moorings
- Galveston Channel Moorings
- Galveston Causeway/RR
- Freeport Wiggles

High Island to Brazos River

Section 216

Project Study Plan

- Initiated
 - February 1995
- Completed
 - February 1996



High Island to Brazos River Feasibility Study

- Initiated
 - April 1996
 - Initial Public Involvement
 - September 1996
- High Island Bends
 - Rollover Pass
 - Sievers Cove
 - Texas City Wye
 - Pelican Island Moorings
 - Galveston Moorings
 - Galveston Causeway/RR
 - Greens Lake Moorings
 - West Bay Washout
 - Chocolate Bayou Wye
 - Freeport Wiggles

High Island to Brazos River Feasibility Study

Current Status

Complete Feasibility Report/ Environmental Assessment	March 2003
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Division Engineer's Public Notice	April 2003
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Study Areas

Overview

HIGH ISLAND TO BRAZOS RIVER

GIWW-SEC 216

GI-SURVEY



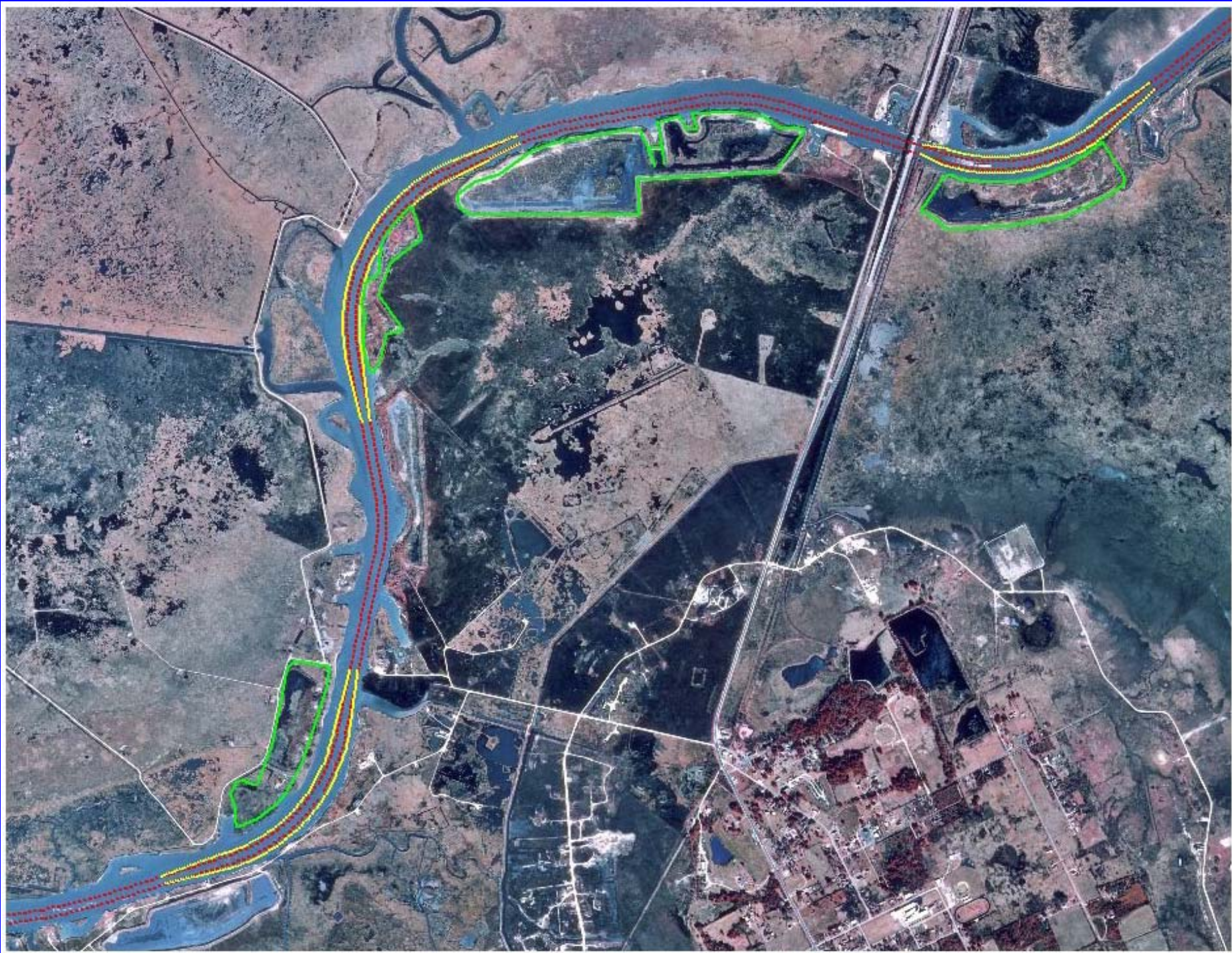


High Island Bends



- Three Sharp Bends
- Navigation Delays
- One-way Traffic
- Groundings
- Alignment for Bridge

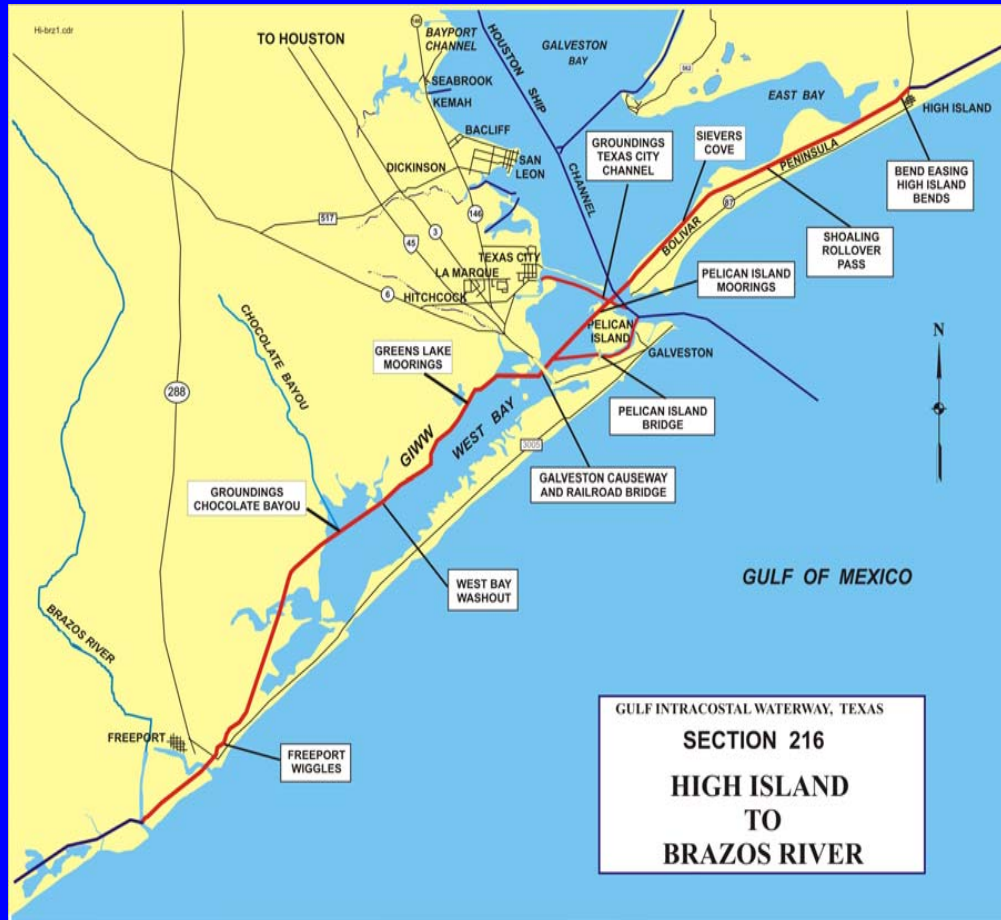




Project Site	First Cost	Average Annual Cost	Annual O&M Cost	Total Annual Cost	Annual Benefits	B/C Ratio	Net Excess Benefits
High Island Bends	\$5,885,658	\$379,943	\$487,255	\$867,198	\$1,294,548	1.49	\$427,350

Rollover Pass

- Navigation Delays
- Shoaling
- Maintenance Cycles
- Beach Nourishment







Project Site	First Cost	Average Annual Cost	Annual O&M Cost	Total Annual Cost	Annual Benefits	B/C Ratio	Net Excess Benefits
Rollover Pass	\$2,292,690	\$147,938	\$0	\$147,938	\$564,358	3.81	\$416,420

Sievers Cove



- Navigation Delays
- Safety

East Bay

GIWW



Marsh Creation Atl.

Channel Widening

Upland Disposal Site

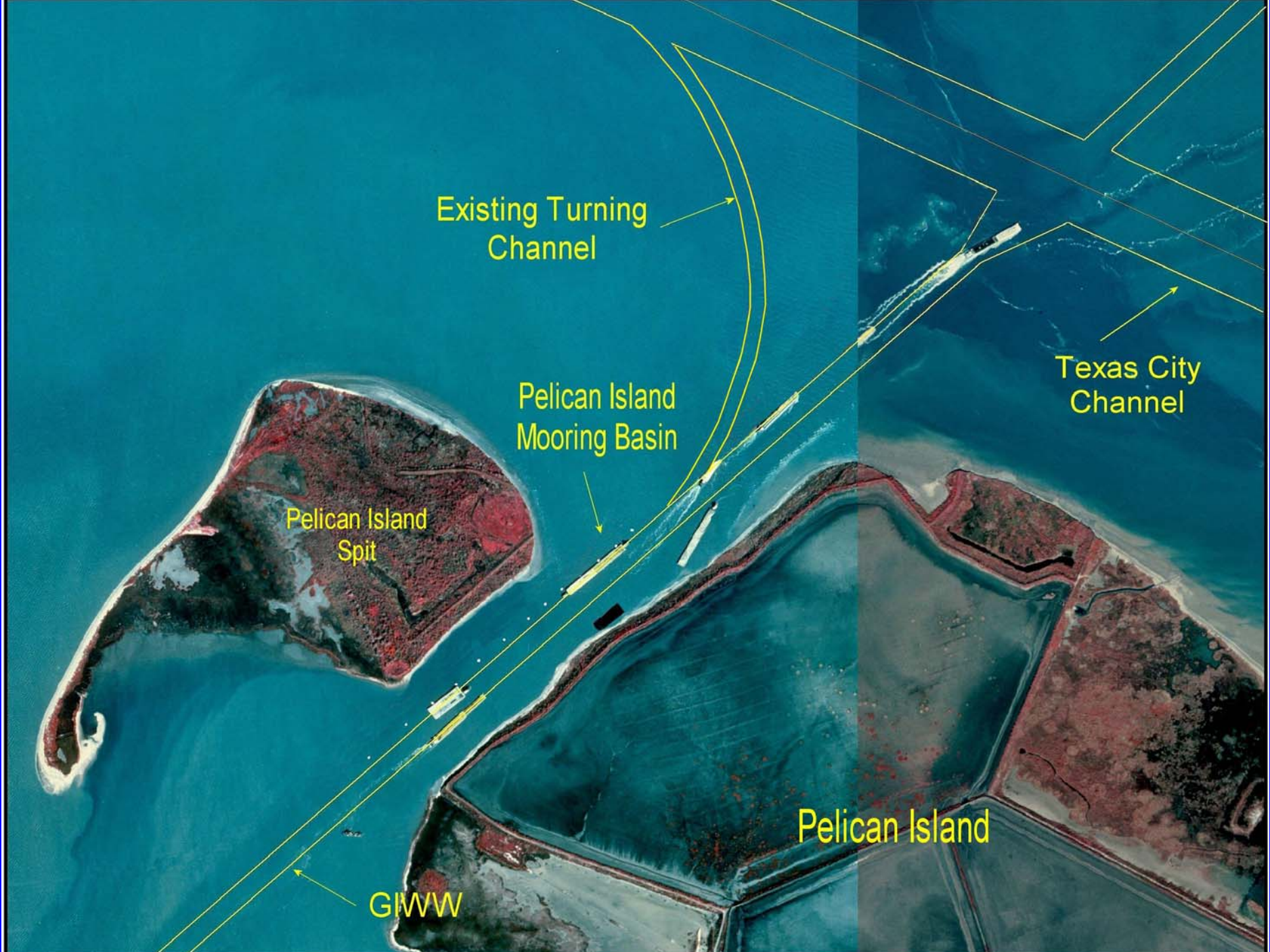


Project Site	First Cost	Average Annual Cost	Annual O&M Cost	Total Annual Cost	Annual Benefits	B/C Ratio	Net Excess Benefits
Sievers Cove	\$637,226	\$41,135	\$42,445	\$83,580	\$507,332	6.07	\$423,752

Texas City Wye/Pelican Island Moorings



- Navigation Delays
- Non-utilization
- Congestion
- Safety
- Location/Moorings
- Marsh Creation



Existing Turning
Channel

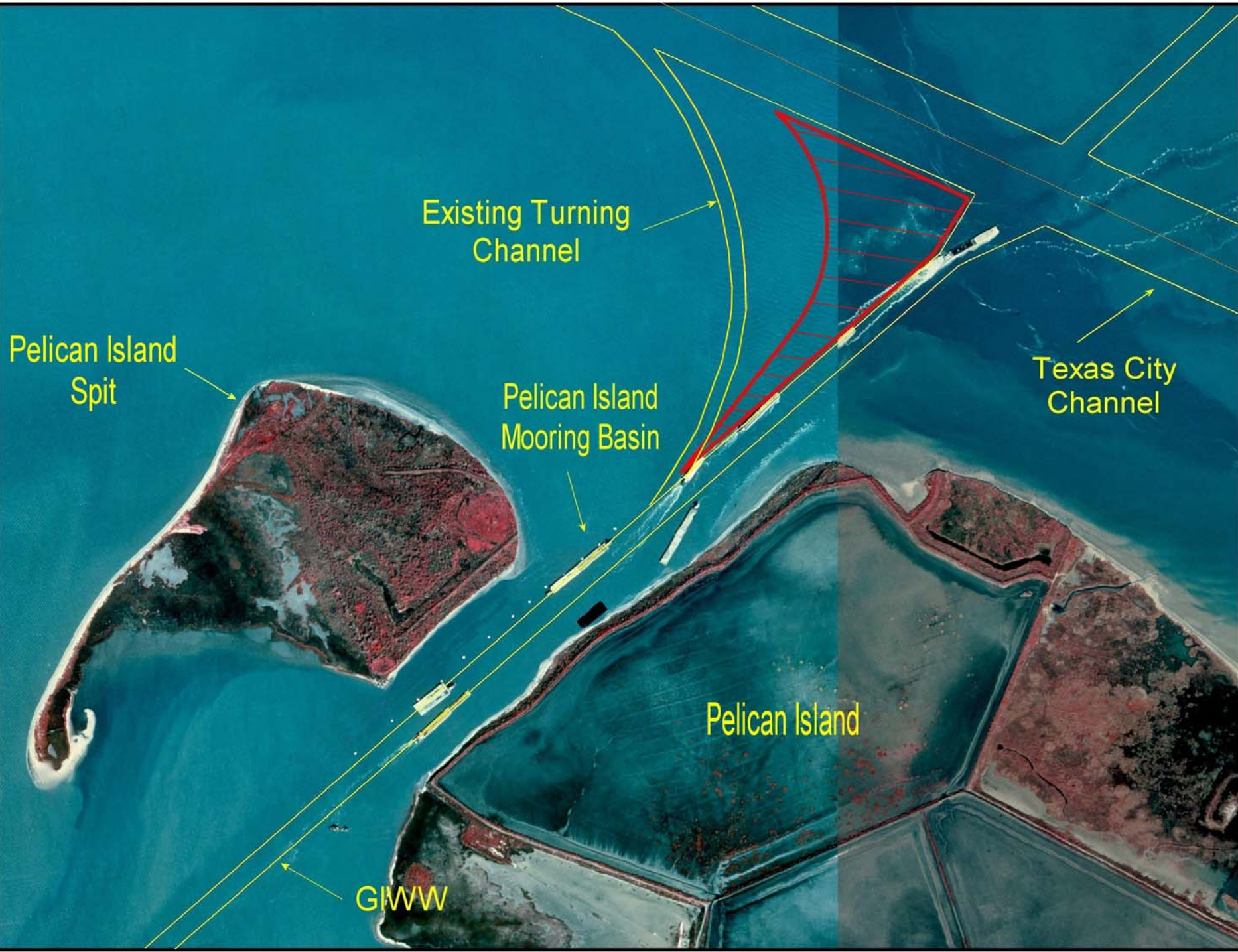
Pelican Island
Mooring Basin

Pelican Island
Spit

Texas City
Channel

Pelican Island

GIWW



Existing Turning
Channel

Pelican Island
Spit

Pelican Island
Mooring Basin

Texas City
Channel

Pelican Island

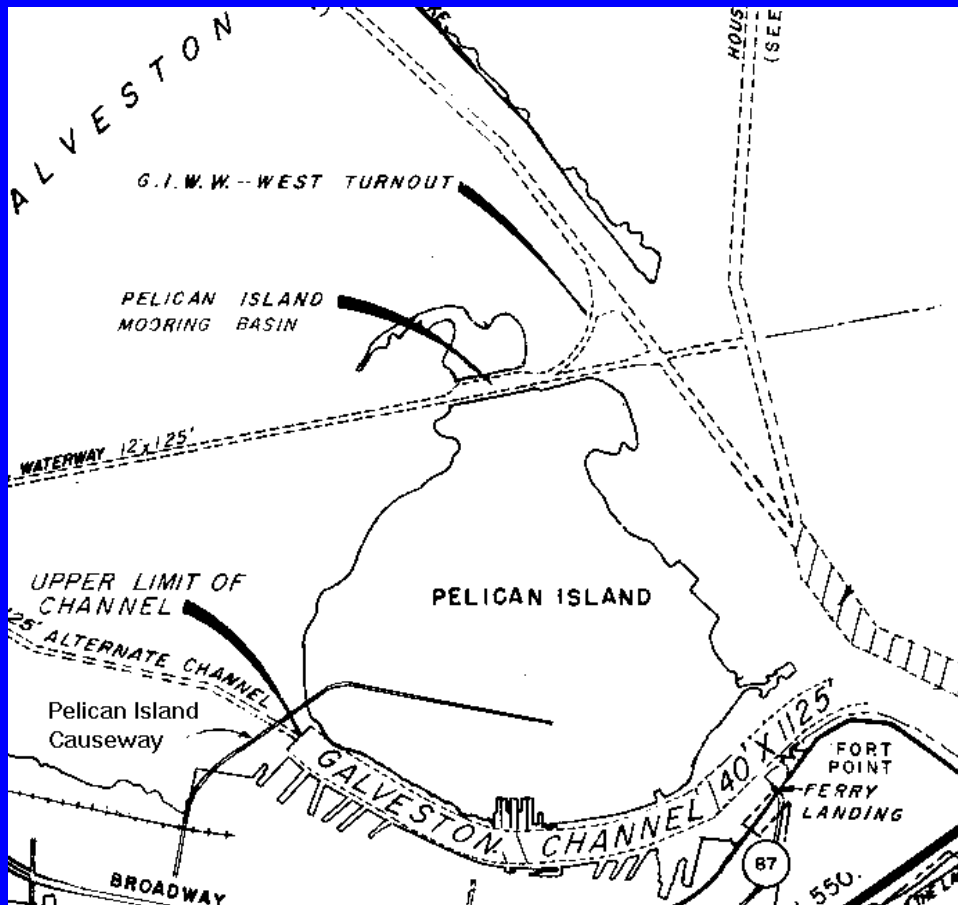
GIWW



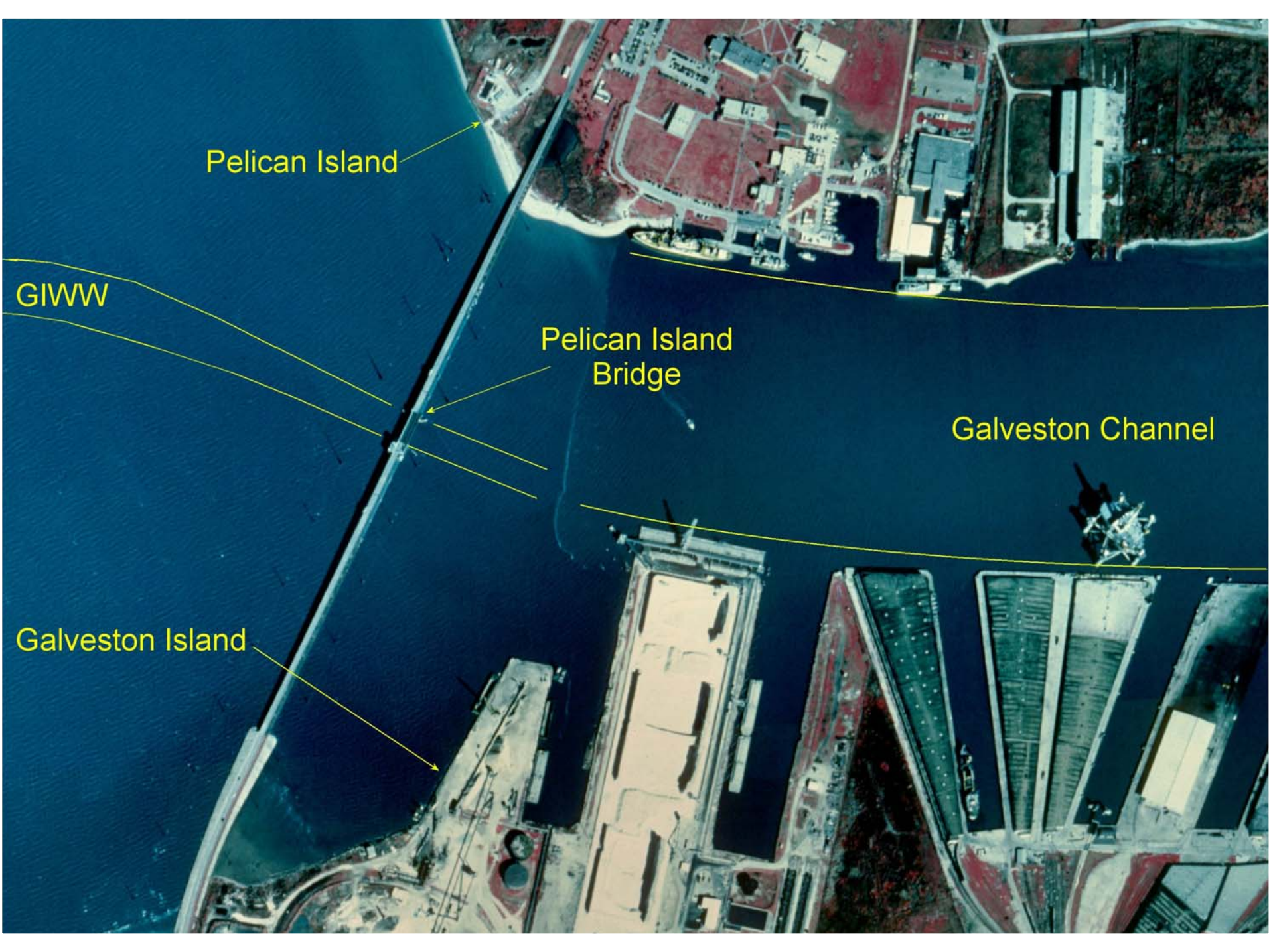
Project Site	First Cost	Average Annual Cost	Annual O&M Cost	Total Annual Cost	Annual Benefits	B/C Ratio	Net Excess Benefits
Pelican Moorings/ Texas City Wye	\$4,172,976	\$269,382	\$220,835	\$490,217	\$606,921	1.24	\$116,704

Galveston Moorings

(Pelican Island Bridge)



- Navigation Delays
- Non-utilization
- Safety



Pelican Island

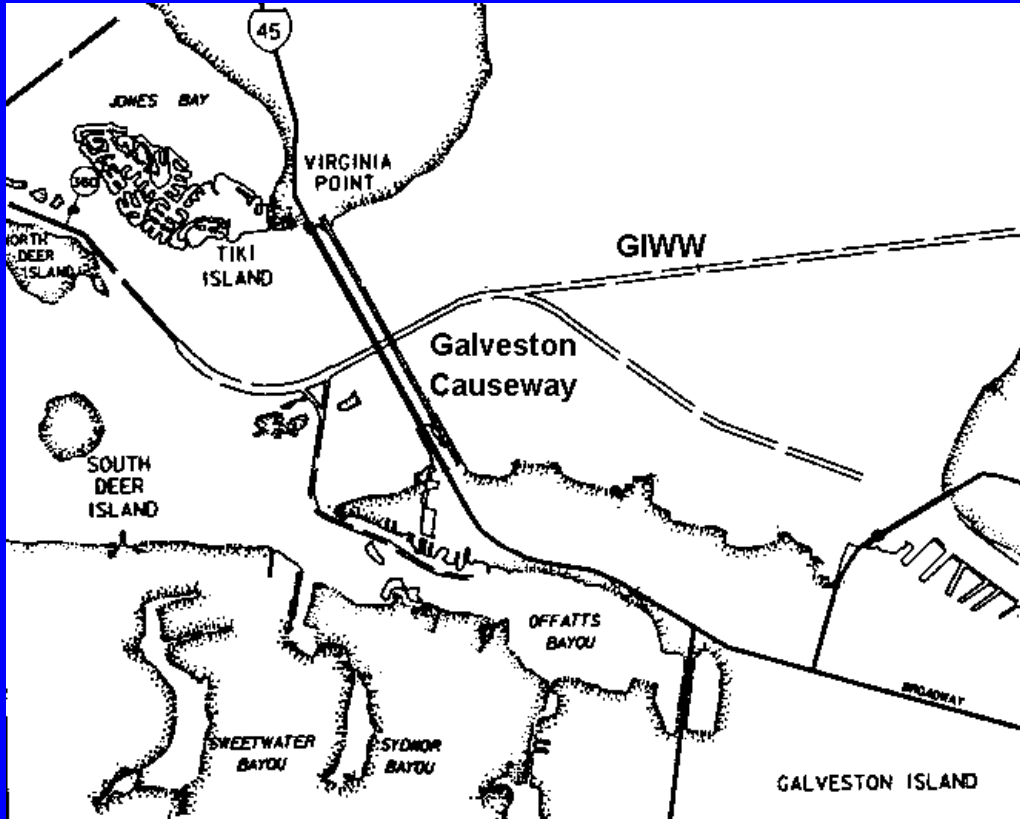
GIWW

Pelican Island
Bridge

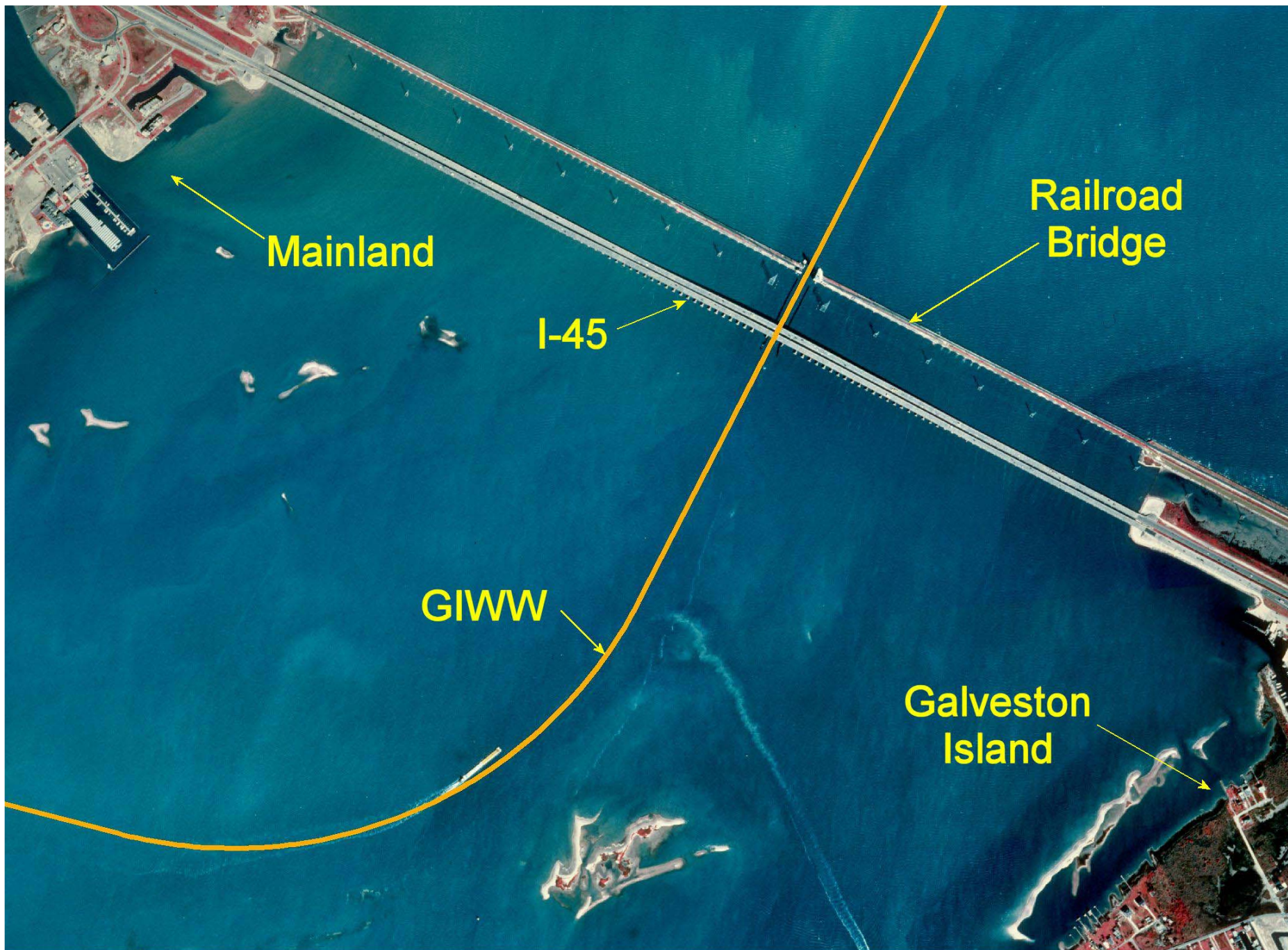
Galveston Channel

Galveston Island

Galveston Causeway/Railroad Bridge



- Navigation Delays
- Constriction
- Alignment
- Wind and Current Effects
- Safety



Greens Lake Moorings



- Navigation Delays
- Safety
- Marsh Creation
- Erosion Protection



Greens Lake

GIWW

West
Bay

**Greens
Lake**

**Beneficial
Use Alt.**

Mooring Basin

GIWW

**Hydraulic-Filled
Levee**

**Placement
Area**

West Bay



Project Site	First Cost	Average Annual Cost	Annual O&M Cost	Total Annual Cost	Annual Benefits	B/C Ratio	Net Excess Benefits
Greens lake Moorings	\$2,712,655	\$175,113	\$111,220	\$286,333	\$750,209	2.62	\$463,877

West Bay Washout



- Navigation Delays due to Shoaling
- Loss of Banks
- Erosion of Uplands
- Protection of GIWW
- Restoration of Barrier Island



This is an aerial photograph of a coastal region. On the left side, there is a large, irregularly shaped body of water with a light blue-green hue, labeled 'Halls Lake'. To the right of the lake, a narrow, elongated strip of land runs diagonally from the bottom left towards the top right. This strip is bordered by a dark blue body of water on its right side, labeled 'West Bay'. The strip itself has a light-colored, sandy or silty appearance, with some darker patches and structures visible. A yellow arrow points to a specific location on this strip, labeled 'GIWW'. The top right corner of the image shows a continuation of the strip, with more structures and a different water color. The overall image has a slightly grainy, historical quality.

Halls
Lake

GIWW

West Bay



Project Site	First Cost	Average Annual Cost	Annual O&M Cost	Total Annual Cost	Annual Benefits	B/C Ratio	Net Excess Benefits
West Bay Washout	\$4,169,670	\$269,169	\$59,129	\$328,298	\$462,109	1.4	\$133,811

Chocolate Bayou Wye



- Navigation Delays
- Non-utilization (West)
- Safety



Freeport Wiggles



- Navigation Delays
- Safety Issues





Curve 4

Proposed
Realignment

Curve 3

Curve 2

Curve 1

Gulf of Mexico

